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Action was improper under M.P.E.P. §706.07(a) as none of the rejections of the Office Action dated July 28, 2003 were maintained in the Final Office Action. Further, the Final Office Action presented two new rejections; neither rejection being necessitated by Applicants' amendments made in Amendment A dated October 21, 2003. Examiner Cole agreed with Mr. Goff's arguments. As such, Examiner Cole agreed to consider Applicants' Remarks in this Response After Final Office Action and to withdraw the finality of the Office Action.

Mr. Goff further contended that claims 1-6, 9-17, 20-23, 26-28, 31-35, and 38 were patentable over the prior art, and in particular WO 97/31092 (Romano et al.), because the Romano et al. reference fails to teach or suggest glycine betaine as an osmoregulation protector as contended by the Office.

1. Rejection of Claims 1-6, 9-11, 14-17, 20-23, 26-28, 31-35 and 38 Under §103(a)

Reconsideration is requested of the rejection of claims 1-6, 9-11, 14-17, 20-23, 26-28, 31-35 and 38 under 35 U.S.C. §103(a) as being unpatentable over Mandell et al. (WO 00/66187) in view of Romano et al. (WO 97/31092).

Claim 1 is directed to an absorbent product for minimizing the amount of ammonia produced by bacteria. The absorbent product comprises an osmoregulation protector present in an amount capable of interacting with bacteria such that the production of ammonia by the bacteria is minimized. The osmoregulation protector is selected from the group consisting of glycine betaine, proline betaine, trigonelline, carnitine, and arsenobetaine.

Mandell et al. disclose an odor controlling superabsorbent polymer (SAP) having an odor controlling compound homogeneously

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distributed throughout the SAP. The SAP may be used in sanitary goods, paper diapers, disposable diapers, and similar hygienic goods. The odor controlling compound may be physically dispersed throughout the SAP particle, or bound or grafted to the polymer, or both. The odor controlling compounds of Mandell et al. include cyclodextrin compounds, triclosan, amphoteric surfactants, water-insoluble phosphates, and mixtures thereof. Within a long laundry list of amphoteric surfactants, Mandell et al. disclose 15 or so betaines as suitable additives. Mandell et al. theorize that the odor controlling compounds may control odor by absorbing ammonia, by slowing and/or preventing the enzymatic formation of malodorous ammonia, and/or by killing microorganisms.

As admitted by the Office in the Final Office Action, and the Examiner in the Interview, Mandell et al. fail to disclose that glycine betaine, proline betaine, trigonelline, carnitine or arsenobetaine can be used in an absorbent article to control ammonia production. This is a requirement of claim 1, and is a significant aspect of Appellants' invention. Although the reference does disclose betaines generally, and 15 or so betaines specifically, there is no disclosure of the specific betaines required by the instant claim 1. Additionally, none of the 19 or so working examples of Mandell et al. disclose the use of any betaine compound as an odor controlling compound, or otherwise.

In order for the Office to show a *prima facie* case of obviousness, M.P.E.P. §2143 requires that the Office meet three criteria: (1) the prior art reference(s) must teach or suggest all of the claim limitations; (2) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings;

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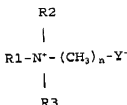
and (3) there must be some reasonable expectation of success. Further, in evaluating obviousness, the Office must ascertain what would have been obvious to one of ordinary skill in the art at the time the invention was made. The Office has clearly failed to meet its burden under the first prong set forth above as the prior art references have not taught or suggested all of the claimed limitations.

As noted above, Mandell et al. do not teach or suggest an absorbent article comprising an osmoregulation protector selected from the group consisting of glycine betaine, proline betaine, trigonelline, carnitine, and arsenobetaine. As such, in an attempt to find each and every element of claim 1 as required by the M.P.E.P. for a determination of *prima facie* obviousness, the Office cites the Romano et al. reference for combination with Mandell et al.

Romano et al. disclose disinfecting compositions comprising a peroxxygen bleach, a betaine or sulphobetaine surfactant, and an antimicrobial compound. Romano et al. also disclose wipes impregnated with the liquid composition. Romano et al. list suitable betaines, including coconut betaine and lauryl betaine, for use in their claimed compositions, but do not specifically list glycine betaine, proline betaine, trigonelline, carnitine, and arsenobetaine.

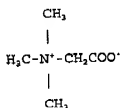
The Office maintains its assertion that Romano et al. disclose a wet wipe which is impregnated with a solution which may comprise glycine betaine. Romano et al. indicate that their preferred betaine or sulphobetaine surfactants have the formula:

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wherein R1 is an alkyl radical containing from 1 to 24 carbon atoms, preferably from 8 to 18, and more preferably from 12 to 14, wherein R2 and R3 contain from 1 to 3 carbon atoms, and preferably 1 carbon atom, wherein n is an integer of from 1 to 10, preferably from 1 to 6 and more preferably 1, Y is selected from the group consisting of carboxyl and sulfonyl radicals and wherein the sum of R1, R2, and R3 radicals is from 14 to 24 carbon atoms.<sup>1</sup> Specific betaines listed by Romano et al. include lauryl betaine and coconut betaine.

In contrast, glycine betaine has the formula:



The formula of glycine betaine requires the sum of R1, R2, and R3 for glycine betaine be 3 carbon atoms, as opposed to 14 to 24 carbon atoms, as required by Romano, et al., and shown in every specific betaine compound disclosed by Romano et al., including both lauryl betaine and coconut betaine.

<sup>1</sup> Romano et al. at p. 8, ln. 1-14 and claim 5 at p. 25, ln. 34 through p. 26, ln. 13.

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As agreed upon by Examiner Cole and Mr. Goff in the telephone interview of February 3, 2004, the formula for betaines in the Romano et al. reference is clearly inconsistent, and may be read in many different ways. As such, Examiner Cole took the position that since the disclosure is inconsistent, the language "wherein the sum of R1, R2, and R3 radicals is from 14 to 24 carbon atoms" was not a limitation, but instead was a preferred embodiment of R1, R2, and R3. Respectfully, Applicants assert this position is improper as the requirement that the sum of R1, R2, and R3 must be from 14 to 24 carbon atoms should not and cannot be read as a preferred, optional, embodiment. Romano et al. use the terms "preferred" and "preferably" six times in the paragraph describing preferred betaines. However, neither term, nor a similar term, is used anywhere in reference to the language "wherein the sum of R1, R2, and R3 must be from 14 to 24 carbon atoms." As such, this language is not "optional" or "preferred." Therefore, this language must be construed as a positive requirement that limits the group of disclosed betaines in Romano et al. to R1, R2, R3 having from 14 to 24 carbon atoms. This interpretation is consistent with the only specific betaine compounds listed by Romano et al. (lauryl betaine and coconut betaine).

In further support of this assertion, M.P.E.P. §2141.02 states that "a prior art reference must be considered in its entirety, i.e. as a whole, including portions that would lead away from the claimed invention" (citing W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983)). Thus, the Romano et al. reference must be read as a whole, taking into consideration the requirement that the sum of R1, R2, and R3 must be from 14 to 24 carbon atoms. Reading and interpreting only a portion of the disclosure is inconsistent

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with M.P.E.P. rules.

Furthermore, in a recent number of Federal Circuit decisions, the Federal Circuit has suggested that, when a term can reasonably be given two meanings and the specification does not provide a clear basis for selecting one, the narrower reading should be adopted on the ground that the patentee is ultimately responsible for the drafting of the patent application.<sup>2</sup> As such, Romano et al. should be given the narrower reading by making the sum language a positive limitation that cannot be ignored.

Additionally, and importantly, even if one skilled in the art would read the requirement that the sum of R1, R2, and R3 must be from 14 to 24 carbon atoms as a preferred embodiment (Applicants strongly disagree as noted above), Romano et al. do not teach or suggest the use of glycine betaine. Romano et al. do teach betaines generally, however, the reference does not specifically teach or suggest glycine betaine, as required by claim 1.

Specifically, in order to arrive at Applicants' invention, one skilled in the art would have had to pick and choose from a myriad of options in the Romano et al. reference, without any teaching or suggestion as to which option to choose; with the notable exception of long carbon chain betaines such as coconut betaines and lauryl betaines which clearly teach away from claim 1. Notably, one skilled in the art would have had to choose from at least two hundred sixteen possible combinations of R1, R2, and R3 to require R1, R2, and R3 to each independently be one carbon

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<sup>2</sup>See Chisum §18.03[2] [f] [iii], citing to Digital Biometrics, Inc. v. Identix Inc., 149 F.3d 1335, 1344-48, 47 USPQ2d 1418, 1424-27 (Fed. Cir. 1998).

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atom. The choice of making R1 independently one carbon atom would have had to be made in direct contrast to the teaching of the preferred ranges of R1; that of from 8 to 18 carbon atoms and more preferably from 12 to 14 and in direct contrast to each and every specific compound of the cited reference. Significantly, Romano et al. disclose as particularly suitable betaine surfactants C<sub>12</sub>-C<sub>18</sub> alkyl dimethyl betaines such as coconut betaine and C<sub>10</sub>-C<sub>16</sub> alkyl dimethyl betaines such as lauryl betaine. Further, Applicants note that of the four examples in the Romano et al. reference, not one of them include glycine betaine as an ingredient in the liquid composition. The four working examples in Romano et al. all disclose coconut betaine and lauryl betaine.<sup>3</sup> Clearly, Romano et al. contemplated the use of these much longer carbon groups in their betaines. Thus, one skilled in the art would not be taught to use one carbon atom for the R1 radical in combination with one carbon atom for both R2 and R3. Romano, et al. thus do not specifically disclose waxes comprising glycine betaine, proline betaine, trigonelline, carnitine, or arsenobetaine. This is a requirement of Applicants' claim 1 and a signification aspect of the invention.

Thus, there is simply no disclosure of glycine betaine, or any of Applicants' claimed betaines, as the osmoregulation protector in an absorbent article as required by claim 1. As such, the Office has failed to make a *prima facie* obviousness case for the use of glycine betaine in an absorbent article. As such, claim 1 is patentable over Mandell et al. in view of Romano et al.

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<sup>3</sup>Romano et al., at p. 22, ln. 19 through p. 24, ln. 14. Applicants note that both coconut betaine and lauryl betaine have 12 or more carbon atoms at the R1 radical.

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Claims 2-6 and 9-13 depend from claim 1. As such, claims 2-6, and 9-13 are patentable for the same reasons as claim 1 set forth above, as well as for the additional elements they require.

Claim 14 is similar to claim 1 and is patentable for the same reasons as claim 1 set forth above, as well as for the additional requirements it sets forth. Claims 15-17 and 20 depend from claim 14. As such, claims 15-17 and 20 are patentable for the same reasons as claim 14 set forth above, as well as for the additional elements they require.

Claim 21 is similar to claim 1 and is patentable for the same reasons as claim 1 set forth above, as well as for the additional requirements it sets forth. Claims 22-23 and 26 depend from claim 21. As such, claims 22-23 and 26 are patentable for the same reasons as claim 21 set forth above, as well as for the additional elements they require.

Claim 27 is similar to claim 1 and is patentable for the same reasons as claim 1 set forth above, as well as for the additional requirements it sets forth.

Claim 28 is similar to claim 1 and is patentable for the same reasons as claim 1 set forth above, as well as for the additional requirements it sets forth. Claim 31 depends from claim 28. As such, claim 31 is patentable for the same reasons as claim 28 set forth above, as well as for the additional elements it requires.

Claim 32 is similar to claim 1 and is patentable for the same reasons as claim 1 set forth above, as well as for the additional requirements it sets forth. Claims 33-35 and 38 depend from claim 32. As such, claims 33-35 and 38 are patentable for the same reasons as claim 32 set forth above, as well as for the additional elements they require.



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2. Rejection of Claims 12-13 Under §103(a)

Reconsideration is requested of the rejection of claims 12-13 under 35 U.S.C. §103(a) as being unpatentable over Mandell et al. in view of Romano et al., as applied to the claims above, and further in view of Lorenzi et al. (U.S. 6,217,889).

The Mandell et al. and Romano et al. references are discussed above.

Lorenzi et al. disclose disposable personal care articles suitable for cleansing. The articles may comprise a water insoluble substrate, a creped nonwoven layer and a cleansing component. The cleansing component may include amphoteric lathering surfactants, such as betaines. The articles of Lorenzi et al. may also comprise a therapeutic benefit component, such as structured conditioning agents (e.g. liposomes).

Significantly, Lorenzi et al. also fail to disclose glycine betaine, proline betaine, trigonelline, carnitine, and arsenobetaine. As such, Lorenzi et al. fail to overcome the shortcomings of Mandell et al. and Romano et al. as discussed above.

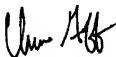
As such, claim 1 is patentable over the combination of Mandell et al. in view of Romano et al. and further in view of Lorenzi et al. for the reasons set forth above. Claim 1 has not been rejected under 35 U.S.C. §103(a) over the combination of Mandell et al., Romano et al., and Lorenzi et al. Therefore, claims 12-13, which depend from claim 1, are patentable for the same reasons as claim 1 above, and for the additional elements they require.

In view of the above, Applicants respectfully request favorable reconsideration and allowance of all pending claims. The Commissioner is hereby authorized to charge any fee deficiency in connection with this Amendment After Final Office

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Action to Deposit Account No. 19-1345 in the name of Senniger,  
Powers, Leavitt & Roedel.

Respectfully Submitted,



Christopher M. Goff, Reg. No. 41,785  
SENNIGER, POWERS, LEAVITT & ROEDEL  
One Metropolitan Square, 16th Floor  
St. Louis, Missouri 63102  
314-231-5400

CMG/JMB/dmt